

GENERIC NAME:

DILTIAZEM

BRAND NAME: Cardizem

CLASS: Calcium Channel Blocker
Calcium antagonist

Mechanism of Action:

Pharmacological: Inhibits calcium ion influx across cell membranes during cardiac depolarization, decreases SA and AV conduction and dilates coronary and peripheral arteries and arterioles.

Clinical effects: Slows the rapid ventricular rate associated with atrial fibrillation and atrial flutter, and reduces coronary and peripheral vascular resistance.

Indications and Field Use:

Rapid ventricular rates associated with atrial fibrillation and atrial flutter, and for PSVT refractory to adenosine.

Contraindications:

Hypotension (less than 90 mmHg systolic)
Acute Myocardial infarction
Cardiogenic shock
Ventricular tachycardia or wide-complex VT of unknown origin
Second or third-degree AV block
Wolff-Parkinson-White (WPW) syndrome
Sick Sinus syndrome
Beta Blocker Use

Adverse Reactions:

CV: hypotension, bradycardia, heart block, chest pain, and asystole
GI: nausea and vomiting
CNS: headache, fatigue, drowsiness

NOTES ON ADMINISTRATION

Incompatibilities/Drug Interactions:

Avoid use in patients with poison- or drug-induced tachycardia.
Calcium chloride can be used to prevent the hypotensive effects of this drug and treat patients with a calcium channel blocker overdose.
Beta blocker use

GD-059-PHS-EMS: Drug Profile for Diltiazem

Adult Dosage:

Initial: 0.25 mg/kg IVP (usually 20 mg) administered over 2 minutes

If response is inadequate, repeat in 15 minutes: 0.35 mg/kg IVP administered over 2 minutes

Maintenance infusion: 5.0 to 15 mg/hr

Pediatric Dosage:

The safety and efficacy of this drug for use in children has not been established.

Route of Administration:

Intravenous bolus(es) followed by a maintenance infusion

Continuous infusion for maintenance

Standard solution: Dilute 100mg (20 ml) in NS 80ml (1 mg/ml)

Dosage: 5 to 10 mg/hr initially; may be adjusted to 15mg/hr if needed

Onset of Action:

IV - immediately

Peak Effects:

IV - 2 hours or less

Duration of Action:

IV - 4 to 6 hours

Dosage Forms/Packaging:

Injection - 5.0 mg/ml 5.0 ml and 10 ml vials

Powdered Form-25 mg vial, (2)

References:

Beck, Richard, *Drug Reference for EMS Providers* (Delmar, 2002).

Bledsoe, Bryan, Clayden, Dwayne, and Papa, Frank, *Prehospital Emergency Pharmacology, 5th Edition* (Mosby, 2001).

Consoulin, Sheryl, Sanders, Mick, and Raynovich, William, *Prehospital Drug Therapy, 2nd Edition* (Mosby, 2002).

Skidmore-Roth, Linda (Editor), *2004 Mosby's Nursing Drug Reference* (Mosby, 2004).